Medicare Fee-For-Service Provider Utilization & Payment Data Referring Durable Medical Equipment, Prosthetics, Orthotics and Supplies Public Use File: A Methodological Overview

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1. Background

The Provider Utilization and Payment Data Referring Durable Medical Equipment, Prosthetics, Orthotics and Supplies (DMEPOS) Public Use File (herein referred to as "Referring Provider DMEPOS PUF"), presents information on DMEPOS products and services provided to Medicare beneficiaries ordered by physicians and other healthcare professionals. The Referring Provider DMEPOS PUF contains data on utilization, payment (allowed amount, Medicare payment and Medicare standardized payment), and submitted charges organized by National Provider Identifier (NPI), Healthcare Common Procedure Coding System (HCPCS) code and supplier rental indicator. This PUF is based on information from CMS administrative claims data for Medicare beneficiaries enrolled in the fee-for-service program available from the CMS Chronic Condition Data Warehouse (www.ccwdata.org). The data in the Referring Provider DMEPOS PUF covers calendar year 2013 through calendar year 2017 and contains final-action (i.e., all claim adjustments have been resolved) Part B non-institutional DMEPOS line items for the Medicare fee-for-service (FFS) population.

2. Key Data Sources

The data used in the Referring Provider DMEPOS PUF are based upon CMS administrative claims data for Medicare beneficiaries enrolled in the fee-for-service program. These data are available from the CMS Chronic Condition Data Warehouse (CCW), a database with 100% of Medicare enrollment and fee-for-service claims data. Claim counts, supplier counts, service counts, supplier charges, Medicare allowed amounts and payments and the supplier rental indicator are summarized from Part B non-institutional claims processed through DMEPOS Medicare Administrative Contractor (MAC) Jurisdictions (NCH Claim Type Codes '81', '82'). For additional information on the CCW, visit www.ccwdata.org.

Referring Provider demographics are also incorporated in the Referring Provider DMEPOS PUF and include name, credentials, gender, complete address and entity type from the National Plan & Provider Enumeration System (NPPES), which CMS developed to assign unique identifiers, known as National Provider Identifiers (NPIs), to health care providers. The health care provider's demographic information is collected at the time of enrollment and updated periodically. The demographic information provided in the Referring Provider DMEPOS PUF is based upon information extracted from NPPES as of the end of the subsequent calendar year (e.g., The 2017 Referring Provider DMEPOS PUF includes NPPES information as of the end of calendar year 2017). For additional information on NPPES, please visit https://nppes.cms.hhs.gov/NPPES/Welcome.do.

3. Population

The Referring Provider DMEPOS PUF includes aggregated data for referring providers ordering DMEPOS products and services that are rendered by suppliers during the calendar year. The data is restricted to referring providers with a valid NPI.

4. Aggregation

The spending and utilization data in the Referring Provider DMEPOS PUF are aggregated to the following:

a) the NPI for the referring provider (numeric identifier registered in NPPES),
b) the Healthcare Common Procedure Coding System (HCPCS) code of the product or service provided by the DMEPOS supplier, and
c) the supplier rental indicator (value of either 'Y' or 'N') derived from DMEPOS supplier claims.

There can be multiple records for a given referring NPI based on the number of distinct HCPCS codes that are billed by the DMEPOS supplier. Furthermore, there can be multiple records for the same HCPCS code in cases where both rental and purchase of a product has been referred by the NPI. Data has been aggregated based on the supplier rental indicator because separate fee schedules apply for rental versus purchase of products. To protect the privacy of Medicare beneficiaries, any aggregated records which are derived from 10 or fewer claims are excluded from the Referring Provider DMEPOS PUF. Please see the section on Limitations for additional information about data redactions and suppression in the Referring Provider DMEPOS PUF.

5. Data Contents

Summary Tables

Two summary type tables have been created to supplement the information reported in the Referring Provider DMEPOS PUF: 1) aggregated information by referring provider (NPI) and 2) aggregated information by State/National and HCPCS code. The aggregated reports are not restricted to the redacted data reported in the Referring Provider DMEPOS PUF but are aggregated based on all Medicare Part B non-institutional DMEPOS claims.

Medicare Referring Provider Aggregate Table

The "Medicare Referring Provider DMEPOS NPI Aggregate table" contains information on utilization, payment (allowed amount, Medicare payment, and Medicare standardized payment), and submitted charges organized by Referring Provider NPI. Separate sub totals for durable medical equipment services, prosthetic and orthotic services and drug and nutritional services are included in addition to overall utilization, payment and charges. In addition, beneficiary demographic and health characteristics are provided which include age, sex, race, Medicare and Medicaid entitlement, chronic conditions and risk scores.

Please see the data dictionary for more detailed information on the specific variables included in this table.

Medicare National/State HCPCS Aggregate Tables

The "Medicare National/State DMEPOS HCPCS Aggregate tables" contain information on utilization, payment (allowed amount, Medicare payment, and Medicare standardized payment), and submitted charges organized by HCPCS and supplier rental indicator in the national table and organized by referring provider state, HCPCS and supplier rental indicator in the state table.

Please see the data dictionary for more detailed information on the specific variables included in this table.

6. Data Limitations:

Although the Referring Provider DMEPOS PUF has a wealth of payment and utilization information about many Medicare Part B DMEPOS products and services, the dataset also has a number of limitations that are worth noting.

First, the data in the Referring Provider DMEPOS PUF may not be representative of the provider's referring DMEPOS habits for the entire practice. The data in the file only has information for Medicare beneficiaries with Part B FFS coverage, but providers typically refer many other patients who do not have that form of coverage. The Referring Provider DMEPOS PUF does not have any information on patients who are not covered by Medicare, such as those with coverage from other federal programs (like the Federal Employees Health Benefits Program or Tricare), those with private health insurance (such as an individual policy or employer-sponsored coverage), or those who are uninsured. Even within Medicare, the Referring Provider DMEPOS PUF does not include information for patients who are enrolled in any form of Medicare Advantage plan.

The information presented in this file also does not indicate the quality of care provided by individual providers. The file only contains cost and utilization information, and for the reasons described in the preceding paragraph, the volume of products and services presented may not be fully inclusive of all products and services referred by the provider.

Medicare allowed amounts and Medicare payments for a given HCPCS code can vary based on a number of factors, including modifiers, geography, and other services performed during the same day/visit. For example, in some cases modifiers impact allowed amounts and payments. While we have accounted for the rental versus purchase of DMEPOS products by aggregating these separately in the Referring Provider DMEPOS PUF, other modifiers (which signal a change in how the HCPCS code for the product or service should be applied) may impact allowed amounts and payments and have not been accounted for. In addition, allowed amounts and payments vary geographically because Medicare makes adjustments for most services based on an area's cost of living. For standard payment and allowed amount rates by CPT/HCPCS code, please go to https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/DMEPOSFeeSched/index.html.

Additionally, the data are not risk adjusted and thus do not account for difference in the underlying severity of disease of patient populations treated by referring providers. However, we have provided average beneficiary risk scores in the "Medicare Referring Provider DMEPOS NPI Aggregate Table" (i.e., one record per NPI) to provide information on the health status of the beneficiaries the providers serve. Also, since the data presented are summarized from actual DMEPOS claims received from suppliers and no attempts were made to modify any data (i.e., no statistical outliers were removed or truncated), in rare instances the average submitted charge amount may reflect errors included on claims submitted by suppliers.

As noted earlier, the file does not include data for products or services that were performed on 10 or fewer claims, so users should be aware that summing the data in the file may underestimate the true Part B FFS DMEPOS totals that are ordered by the referring provider.

Finally, if users try to link provider data (note: it is not possible to link by beneficiary) from this file to other public datasets, please be aware of the particular Medicare populations included and timeframes used in each file that will be merged. For example, efforts to link the Referring Provider DMEPOS PUF data to the Physician and Other Supplier PUF data would need to account for the fact that some providers (e.g. nurse practitioners/physician assistants) may refer DMEPOS products and services but may not necessarily render services as the performing NPI in the Physician and Other Supplier PUF. Also, efforts to link the Referring Provider DMEPOS PUF data to Part D prescription drug data would need to account for the fact that some beneficiaries who have FFS Part B coverage (and are thus included in the Referring Provider DMEPOS PUF) do not have Part D drug coverage (and thus not represented in Part D data files). At the same time, some beneficiaries that have Part D coverage (and are thus included in the Part D data) do not have FFS Part B coverage (and thus not included in the Referring Provider DMEPOS PUF). Another example would be linking to data constructed from different or non-aligning time periods, such as publically available data on physician referral patterns, which is based on an 18-month period.

Redaction and Suppression

As previously stated, the Referring Provider DMEPOS PUF detail file does not include products/services with fewer than 11 DMEPOS claims, so users should be aware that summing data in the detail file will underestimate the true total for all DMEPOS products and services. In addition, in the detail file as well as the summary tables, beneficiary counts, claim counts, charges and payments are suppressed if the value is between 1 and 10 and also may be removed for counter-suppression purposes. Since total claim counts are available on the files and some subgroups (e.g., durable medical equipment, prosthetics and orthotics, and drug and nutritional products) sum to the total claim count, if one of the sub-group categories is suppressed because it has a claim count between 1 and 10 (primary suppression), then the next lowest claim count sub-group category must be counter-suppressed to prevent disclosure of this primary suppressed value. Since only one sub-group category is suppressed, you can mathematically determine it using the values from the other claim count categories and the total claim count information. To help users understand the reasons for suppression, suppression flag variables are included.

Suppressed values represent values 1 to 10 and are indicated by a "blank" in the data files. When analyzing the data, users should note that excluding the suppressed values will result in estimates that are different from the true values. If users choose to retain the suppressed values in their analysis, please note that most statistical software packages will treat the "blanks" as "zeroes", resulting in underestimates of the true values. Alternatively, users may assign an imputed value of their choosing, e.g. five (5), for a primary-suppressed value.

7. Additional Information

Other Data Sources: CMS also releases the "Medicare Fee-For-Service Public Provider Enrollment Data" that include provider name and address information from the Provider Enrollment and Chain Ownership System (PECOS). These data are updated on a quarterly basis and are available at data.cms.gov.

Medicare Standardized Spending: Users can find more information on Medicare payment standardization by referring to the "Geographic Variation Public Use File: Technical Supplement on Standardization" available within the "Related Links" section of the following web page: https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Medicare-Geographic-Variation/GV_PUF.html.

HCCs (hierarchical condition categories): CMS developed a risk-adjustment model that uses HCCs (hierarchical condition categories) to assign risk scores. Those scores estimate how beneficiaries' FFS spending will compare to the overall average for the entire Medicare population. The average risk score is set at 1.08; beneficiaries with scores greater than that are expected to have above-average spending, and vice versa. Risk scores are based on a beneficiary's age and sex; whether the beneficiary is eligible for Medicaid, first qualified for Medicare on the basis of disability, or lives in an institution (usually a nursing home); and the beneficiary's diagnoses from the previous year.

The HCC model was designed for risk adjustment on larger populations, such as the enrollees in an MA plan, and generates more accurate results when used to compare groups of beneficiaries rather than individuals. For more information on the HCC risk score, see: https://www.cms.gov/Medicare/Health-Plans/MedicareAdvtgSpecRateStats/Risk-Adjustors.html.

8. Updates:

May 2019 Updates

We have updated the Medicare Referring Provider DMEPOS NPI Aggregate table to include the referring provider's RUCA code. This update begins with calendar year 2017 data. Previous year's data have not been re-published to include this update.

April 2017 Updates

We have updated the Medicare Referring Provider DMEPOS NPI Aggregate table (i.e. one record per NPI) demographic and health information associated with the provider's beneficiary panel. This provider-level summary now includes aggregated information on beneficiary age, sex, race, Medicare and Medicaid entitlement, sixteen (16) chronic conditions and risk scores. In addition, oral cancer drugs billed by providers using the national drug code (NDC) and previously identified with HCPCS codes beginning with 'WW' have been re-classified to the appropriate corresponding HCPCS code beginning with 'J' in the Referring Provider DMEPOS PUF and the National/State HCPCS Aggregate Summaries.

These updates begin with calendar year 2015 data. Previous year's data have not been re-published to include these updates.

November 2017 Updates

We have updated the Referring Provider DMEPOS PUF and all the supplemental summary tables to include Medicare standardized payment amounts. Standardization removes geographic differences in payment rates for individual services and makes Medicare payments across geographic areas comparable.

These updates begin with calendar year 2014 data. Previous year's data have not been re-published to include standardized Medicare payments amounts

November 2015 Updates

We have updated the Referring Provider DMEPOS PUF and the Medicare National/State DMEPOS HCPCS Aggregate tables to include the number of beneficiaries associated with supplier DMEPOS claims. In addition, the Medicare Referring Provider DMEPOS NPI Aggregate table now includes the overall number of beneficiaries associated with supplier DMEPOS claims as well as the number of beneficiaries within each of the sub-groups (durable medical equipment services, prosthetic and orthotic services and drug and nutritional services). Beneficiary counts fewer than 11 have been suppressed to protect the privacy of Medicare beneficiaries.

APPENDIX A – Referring Durable Medical Equipment, Prosthetics, Orthotics and Supplies Public Use File Technical Specifications

This programming specifications appendix provides users with additional information about how the Referring Provider Durable Medical Equipment, Prosthetics, Orthotics and Supplies (DMEPOS) Public Use File (PUF) was developed. It describes the source data used in creating the file, including any supplemental information beyond the Medicare fee-for-service claims. This document also describes the step-by-step methodology CMS used to create the Referring Durable Medical Equipment, Prosthetics, Orthotics and Supplies PUF.

Source Data:

1. ***CMS Durable Medical Equipment, Prosthetic, Orthotic and Other Supplies (DMEPOS) Calendar Year Data*** see: https://www.resdac.org/cms-data/files/dme-ffs

2. ***CMS National Plan and Provider Enumeration System (NPPES) Name and Address Data*** available at: http://download.cms.gov/nppes/NPI_Files.html. The most current NPPES name and address information for active NPIs is in the "NPPES Data Dissemination (month, DD, YYYY)" full NPI replacement file.

3. ***CMS Health Care Common Procedure Coding System (HCPCS) Level II Descriptions*** available at: https://www.cms.gov/Medicare/Coding/HCPCSReleaseCodeSets/Alpha-Numeric-HCPCS.html. The HCPCS Level II crosswalk is titled "**** Alpha-Numeric HCPCS File" (where **** = the year of the DMEPOS calendar year data).

4. ***CMS Carrier Calendar Year Data*** see: https://www.resdac.org/cms-data/files/carrier-ffs

5. ***CMS Provider Specialty Descriptions*** available at: https://data.cms.gov/Medicare-Enrollment/CROSSWALK-MEDICARE-PROVIDER-SUPPLIER-to-HEALTHCARE/j75i-rw8y. The provider specialty crosswalk is titled "Crosswalk Medicare Provider/Supplier to Healthcare Provider Taxonomy".

6. ***National Uniform Claim Committee (NUCC) Taxonomy Code Set*** available at: http://www.nucc.org/index.php?option=com_content&view=article&id=107&Itemid=132.